WHAT IS CLAIMED IS:

1 1.   A method of processing image data representing at
2 least one image, the method comprising:
3   receiving information including at least one of
4 image quality information and image use information;
5   selecting a first encoding format from a
6 plurality of supported encoding formats as a function of
7 said received information;
8   encoding said image data according to the first
9 encoding format to thereby generate first encoded image
10 data representing said image; and
11   storing the first encoded image data using a
12 digital data storage device.

1 2.   The method of claim 1, wherein the image quality
2 information indicates a desired minimum level of image
3 quality at which an image is to be preserved.

1 3.   The method of claim 2, wherein the step of selecting
2 the first encoding format includes selecting the first
3 encoding format to be an encoding format which will
4 preserve the image at a level of quality at least as good
5 as the indicated minimum level of image quality.

1 4.   The method of claim 1, wherein the image quality
2 information indicates the quality of the at least one image
3 represented by said image data.

1   5.   The method of claim 4, wherein the step of selecting

2   the first encoding format includes selecting the first

3   encoding format to be an encoding format which will

4   preserve the image at a level of quality equal to or lower

5   than the indicated quality of the at least one image

6   represented by said image data.

1   6.   The method of claim 4, further comprising:

2   analyzing said image data to generate image

3   quality information received in said step of receiving

4   information.

1   7.   The method of claim 1, further comprising:

2   querying a human for said image quality

3   information.

1   8.   The method of claim 1, wherein the received

2   information further includes data storage limitation

3   information; and

4   wherein the step of selecting a first encoding

5   format is further performed as a function of the received

6   data storage limitation information.

1   9.   The method of claim 1, wherein the received

2   information further includes image source information which

3   indicates a format in which the at least one image

4   represented by said image data was previously stored; and

5   wherein the step of selecting a first encoding

6   format is further performed as a function of the received

7   image source information.

1 10. The method of claim 1, wherein the received
2 information further includes image source information which
3 indicates a type of data storage media which was previously
4 used to store said image data prior to performing said
5 encoding step; and
6   wherein the step of selecting a first encoding
7 format is further performed as a function of the data
8 storage media information.

1 11. The method of claim 10, wherein the indicated type of
2 data storage media includes at least one of digital tape,
3 analog tape and movie film.

1 12. The method of claim 1, further comprising the step of:
2   selecting the quality level at which the at least
3 one image represented by said image data is to be encoded
4 using the selected image format based on the received
5 information.

1 13. The method of claim 12, wherein the quality level is
2 selected from a plurality of supported encoding quality
3 levels.

1 14. The method of claim 13, wherein the plurality of
2 supported encoding quality levels include a first quality
3 level which is a lossless or near loss-less quality level;
4 a second quality level which is a contribution quality
5 level; and a third quality level which is a distribution
6 quality level, the distribution quality level being the
7 level of image quality to be used for distribution of the
8 image to an end viewer.

1 15. The method of claim 13, wherein the received
2 information further includes data storage limitation
3 information; and
4   wherein the step of selecting the quality level
5 at which the at least one image is encoded is further
6 performed as a function of the received data storage
7 limitation information.

1 16. The method of claim 13, wherein the received
2 information further includes image source information which
3 indicates a format in which the at least one image was
4 previously stored; and
5   wherein the step of selecting the quality level
6 at which the at least one image is encoded is further
7 performed as a function of the received image source
8 information.

1 17. The method of claim 14, wherein the received
2 information further includes image source information which
3 indicates a type of data storage media which was previously
4 used to store said image prior to performing said encoding;
5 and
6   wherein the step of selecting the quality level
7 at which the at least one image is encoded is further
8 performed as a function of the received image source
9 limitation information.

1 18. The method of claim 1, wherein said plurality of image
2 formats includes at least two of the encoding formats in
3 the set of MPEG, JPEG and DV encoding formats.

1   19.   The method of claim 1, wherein said image use
2   information indicates at least one data distribution use.

1   20.   The method of claim 19, wherein the indicated data
2   distribution use includes at least one of cable television,
3   satellite broadcast, terrestrial television and Internet.

1   21.   The method of claim 1, wherein said image use
2   information indicates an image archiving use.

1   22.   The method of claim 1, further comprising:
2   retrieving the first encoded image data from the
3   digital data storage device;
4   converting the first encoded image data from the
5   first encoding format to a second encoding format to
6   produce second encoded image data, the second encoded
7   format being different from the first encoding format; and
8   outputting the second encoded image data.

1   23.   The method of claim 22, further comprising:
2   converting the first encoded image data from the
3   first encoding format to a third encoding format to produce
4   third encoded image data, the third encoded format being
5   different from the first and second encoding formats; and
6   outputting the third encoded image data.

1   24.   The method of claim 22, wherein the step of converting
2   the first encoded image data from the first encoding format
3   to a second encoding format includes:

4   decoding said first encoded image data to

5 generate decoded image data; and

6   re-encoding said decoded image data according to

7 the second encoding format.

1 25. A digital storage medium comprising computer

2 executable instructions for controlling a computer system

3 to:

4   receive information including at least one of

5 image quality information and image use information;

6   select a first encoding format from a plurality

7 of supported encoding formats as a function of said

8 received information;

9   encode image data according to the first encoding

10 format to thereby generate first encoded image data

11 representing said image; and

12   store the first encoded image data using a

13 digital data storage device.

1 26. A system for processing and storing at least one of

2 audio and video data, the system comprising:

3   a compression module supporting a plurality of

4 different encoding formats, the compression module

5 including a plurality of encoding modules, each encoding

6 module capable of performing data encoding according to a

7 different standardized encoding format;

8   a control module for selecting from the plurality

9 of encoding formats, an encoding format to be used with a

10 given set of data supplied to the compression module; and

11   a data storage device coupled to the compression
12 module for storing encoded data generated by said
13 compression module.

1   27. The system of claim 26, further comprising:
2   a data retrieval module for retrieving encoded
3   data stored in the data storage device; and
4   a transcoder module for converting encoded data
5   retrieved from the data storage device from a format in
6   which the data was stored to a different data format.

1   28. The system of claim 26, wherein the transcoder module
2   includes:
3   a plurality of decoders, each decoder in the
4   plurality of decoder circuits being capable of decoding at
5   least one of said encoding formats supported by the
6   compression module.

1   29. The system of claim 27, wherein the transcoder module
2   further includes:
3   a plurality of encoders coupled to the plurality
4   of decoder, the plurality of encoders including encoders
5   which support different encoding formats.

1   30. The system of claim 28, wherein the transcoder module
2   further includes:
3   means for outputting data generated by multiple
4   encoders included in said plurality of encoders, from the
5   same decoded data generated by one of said plurality of
6   decoders.

1   31.   The system of claim 27, further comprising:

2   an analysis module capable of performing an

3   indexing operation on encoded data and generating index

4   information therefrom; and

5   a wrapper module coupled to said compression

6   module, the storage device and the analysis module, the

7   wrapper module supplying encoded data generated by said

8   compression module to said analysis module and

9   incorporating index information received from said analysis

10 module into a file with the encoded data supplied to said

11 analysis module.

1   32.   The system of claim 31, wherein the data analysis

2   module includes:

3   decoder circuitry for decoding encoded data; and

4   an indexing circuit for generating indexing

5   information by analyzing decoded data generated by said

6   decoder circuitry.

1   33. The system of claim 31, wherein said data retrieval

2   module is coupled to said storage device and the analysis

3   module, the data retrieval module controlling the retrieval

4   of encoded data from the storage device to be supplied to

5   the analysis module for indexing; and

6   wherein the analysis module indexes retrieved

7   encoded data to generate index information.

1   34.   The system of claim 33, further comprising:

2   an archive storage manager module for coupling

3   the data retrieval module to the analysis module and for

4   adding index information generated by said analysis module

5   from processing retrieved encoded data to the file from

6   which the encoded data was retrieved.

1   35.   The system of claim 27, further comprising:

2   a preview module coupled to said transcoder for

3   displaying images generated from encoded data produced by

4   said transcoder.

1   36.   The system of claim 28, further comprising:

2   a preview module coupled to said compression

3   module for displaying images generated from encoded data

4   generated by said compression module.

1   37.   The system of claim 26, further comprising:

2   means for receiving information including at

3   least one of image quality information and image use

4   information; and

5   wherein the control module includes:

6   means for selecting the encoding format

7   to be used with a given set of data supplied to

8   the compression module as a function of said

9   received information.

1   38.   A method of operating a system to process image data

2   representing an image, the method comprising:

3   receiving image source information indicating at

4   least one of a type of storage media previously used to

5   store the image data and a storage format in which the

6   image data was stored;

7   automatically selecting a first encoding format
8   from a plurality of supported encoding formats as a
9   function of said received information;
10   operating the system to encode said image data
11   according to the first encoding format to thereby generate
12   first encoded image data representing said image; and
13   storing the first encoded image data using a
14   digital data storage device.

1   39.   The method of claim 38, wherein the received image
2   source information indicates the type of storage media
3   previously used to be at least one of digital tape, analog
4   tape, and movie film.

1   40.   The method of claim 38, wherein the received image
2   source information indicates the source format to be one of
3   a JPEG, a DV and an MPEG format.

1   41.   The method of claim 38, further comprising the steps
2   of:
3   retrieving the first encoded image data from the
4   digital data storage device;
5   converting the first encoded image data from the
6   first encoding format to a second encoding format to
7   produce second encoded image data, the second encoded
8   format being different from the first encoding format; and
9   outputting the second encoded image data.

1   42.   The method of claim 41, further comprising:
2   converting the first encoded image data from the
3   first encoding format to a third encoding format to produce

4 third encoded image data, the third encoded format being

5 different from the first and second encoding formats; and

6   outputting the third encoded image data.

1 43. A method of processing image data representing an

2 image, the method comprising:

3   receiving image quality information;

4   selecting an encoding quality level from a

5 plurality of supported encoding quality levels as a

6 function of the received image quality information;

7   encoding said image data to the selected quality

8 level according to a first encoding format to thereby

9 generate first encoded image data representing said image;

10 and

11   storing the first encoded image data using a

12 digital data storage device.

1 44. The method of claim 43, wherein the image quality

2 information indicates a desired minimum level of image

3 quality at which an image is to be preserved.

1 45. The method of claim 44, wherein the step of selecting

2 the encoding quality level includes selecting an encoding

3 quality level which will preserve the image at a level of

4 quality at least as good as the indicated minimum level of

5 image quality.

1 46. The method of claim 43, wherein the image quality

2 information indicates the quality of the image represented

3 by said image data.

1   47.   The method of claim 46, further comprising:

2   analyzing said image data to generate the

3   received image quality information.

1   48.   The method of claim 46, wherein the step of selecting

2   the encoding quality level includes selecting an encoding

3   quality level which will preserve the image at a level of

4   quality equal to or lower than the indicated quality of the

5   image represented by said image data.

1   49.   The method of claim 46, wherein the image quality

2   information further indicates a minimum level of image

3   quality at which an image is to be preserved; and

4   wherein the step of selecting the encoding

5   quality level includes selecting an encoding quality level

6   which will preserve the image at a level of quality lower

7   than the indicated quality of the image represented by said

8   image data but at least as high as the minimum level of

9   image quality at which the image is to be preserved.

1   50.   The method of claim 49, further comprising:

2   querying a human for said image quality

3   information.